



SPLICE FORM 1:

CGTCCTTCCT GGTCCTGCGG GTCCAGGACT GTCCGCGGGG TTGAGGGAAG GGGCCGTGCC CGGTGCCAGC CCAGGTGCTC GCGGCCTGGC TCCATGGCCC TGGTCACAGT GAGCCGTTCG CCCCCGGGCA GCGGCGCCTC CACGCCCGTG GGGCCCTGGG ACCAGGCGGT CCAGCGAAGG AGTCGACTCC AGCGAAGGCA GAGCTTTGCG GTGCTCCGTG GGGCTGTCCT GGGACTGCAG GATGGAGGGG ACAATGATGA TGCAGCAGAG GCCAGTTCTG AGCCAACAGA GAAGGCCCCG AGTGAGGAGG AGCTCCACGG GGACCAGACA GACTTCGGGC AAGGATCCCA GAGTCCCCAG AAGCAGGAGG AGCAGAGGCA GCACCTGCAC CTCATGGTAC 401 AGCTGCTGAG GCCGCAGGAT GACATCCGCC TGGCAGCCCA GCTGGAGGCA 451 CCCCGGCCTC CCCGGCTCCG CTACCTGCTG GTAGTTTCTA CACGAGAAGG 501 AGAAGGTCTG AGCCAGGATG AGACGGTCCT CCTGGGCGTG GATTTCCCTG 551 ACAGCAGCTC CCCCAGCTGC ACCCTGGGCC TGGTCTTGCC CCTCTGGAGT GACACCCAGG TGTACTTAGA TGGAGACGGG GGCTTCAGCG TGACGTCTGG 601 651 TGGGCAAAGC CGGATCTTCA AGCCCATCTC CATCCAGACC ATGTGGGCCA 701 CACTCCAGGT ATTGCACCAA GCATGTGAGG CAGCTCTAGG CAGCGGCCTT 751 GTACCGGGTG GCAGTGCCCT CACCTGGGCC AGCCACTACC AGGAGAGACT 801 GAACTCCGAA CAGAGCTGCC TCAATGAGTG GACGGCTATG GCCGACCTGG 851 AGTCTCTGCG GCCTCCCAGC GCCGAGCCTG GCGGGTCCTC AGAACAGGAG CAGATGGAGC AGGCGATCCG TGCTGAGCTG TGGAAAGTGT TGGATGTCAG 901 TGACCTGGAG AGTGTCACTT CCAAAGAGAT CCGCCAGGCT CTGGAGCTGC 951 GCCTGGGGCT CCCCCTCCAG CAGTACCGTG ACTTCATCGA CAACCAGATG CTGCTGCTGG TGGCACAGCG GGACCGAGCC TCCCGCATCT TCCCCCACCT CTACCTGGGC TCAGAGTGGA ACGCAGCAAA CCTGGAGGAG CTGCAGAGGA 1151 ACAGGGTCAC CCACATCTTG AACATGGCCC GGGAGATTGA CAACTTCTAC 1201 CCTGAGCGCT TCACCTACCA CAATGTGCGC CTCTGGGATG AGGAGTCGGC 1251 CCAGCTGCTG CCGCACTGGA AGGAGACGCA CCGCTTCATT GAGGCTGCAA 1301 GAGCACAGGG CACCCACGTG CTGGTCCACT GCAAGATGGG CGTCAGCCGC 1351 TCAGCGGCCA CAGTGCTGGC CTATGCCATG AAGCAGTACG AATGCAGCCT 1401 GGAGCAGGCC CTGCGCCACG TGCAGGAGCT CCGGCCCATC GCCCGCCCCA 1451 ACCCTGGCTT CCTGCGCCAG CTGCAGATCT ACCAGGGCAT CCTGACGGCC 1501 AGAACCTGAG GGTGGTGGGG AGGAGAAGGT TGTAGGCATG GAAGAGAGCC 1551 AGGCAGCCCC GAAAGAAGAG CCTGGGCCAC GGCCACGTAT AAACCTCCGA 1601 GGGGTCATGA GGTCCATCAG TCTTCTGGAG CCCTCCTTGG AGCTGGAGAG 1651 CACCTCAGAG ACCAGTGACA TGCCAGAGGT CTTCTCTTCC CACGAGTCTT 1701 CACATGAAGA GCCTCTGCAG CCCTTCCCAC AGCTTGCAAG GACCAAGGGA GGCCAGCAGG TGGACAGGGG GCCTCAGCCT GCCCTGAAGT CCCGCCAGTC 1801 AGTGGTTACC CTCCAGGGCA GTGCCGTGGT GGCCAACCGG ACCCAGGCCT 1851 TCCAGGAGCA GGAGCAGGGG CAGGGGCAGG GGCAGGGAGA GCCCTGCATT TCCTCTACGC CCAGGTTCCG GAAGGTGGTG AGACAGGCCA GCGTGCATGA 1901 1951 CAGTGGAGAG GAGGGCGAGG CCTGAGCCCT CACACATGCC CACGCTCCCC TGACACTGAA GAGGATCCAC AACTCCTTGG AGAAACACCC TCACGTCTGT 2051 TGCCGCACAC ATTCCTCTCA GCTCCGCCCC ATACCCGTCA CTACAGCCTC 2101 ACCTCCCACC CCTGTCACTA CGGCCTCACC TCCCACCCCT GTCACTACAG 2151 CCTCACCTCC TACAGCCTTA AGTCCCAGGC CCATGTCTGC CTGTCCAAGG 2201 GCTCAAGACT TTCTAACTGG GATGTGGTAG AGGGACTGAA GGTACCTTTG GGGGCAACAG CACCCTAGTT TCATTCTCAA CTCTAGCCCT GCACACTCAC 2251 CTGTGGCACG GAATGAAAAC AGAGCTTCCC GTGCAAAAAG GGTCACGCCT CCCACCCCG CCCCCTCCT GCACCTCCTG TCCTCTCCCA GTTCATTCCT GGAACCAGCC AGGCCAGGCA ACCAGTGGCC CCCAAAGGCA GGCAGGATCC TCAGGCCCCA GCCGCGGAG GCTGGAAGGG CTGGCAGATC GCTTCCCTCA TCCACCTCCA CCGGTCCAGG TCTTTGCTGC TGTCCCCAGA CCTCCTGTGA 2551 CACCACGCCA GATCACAGGG CACCAGGCCA GAGATAGTCT TCTTTTTGTC CTTTCTGGCC TCTGGCTAGT CAGTTTTTCA TAGCCTTACA GTATCTGGCT 2651

FEATURES:

2701

5' UTR: 1-93 Start: 94-1506 Stop: 1509 3' UTR: 1510-2704

AAAA

1 TGGTTGAGGG AAGGGGCCGT GCCCGGTGCC AGCCCAGGTG CTCGCGGCCT SPLICE FORM 2: GGCTCCATGG CCCTGGTCAC AGTGAGCCGT TCGCCCCCGG GCAGCGGCGC CTCCACGCCC GTGGGGCCCT GGGACCAGGC GGTCCAGCGA AGGAGTCGAC TCCAGCGAAG GCAGAGCTTT GCGGTGCTCC GTGGGGCTGT CCTGGGACTG CAGGATGGAG GGGACAATGA TGATGCAGCA GAGGCCAGTT CTGAGCCAAC AGAGAAGGCC CCGAGTGAGG AGGAGCTCCA CGGGGACCAG ACAGACTTCG GGCAAGGATC CCAGAGTCCC CAGAAGCAGG AGGAGCAGAG GCAGCACCTG CACCTCATGG TACAGCTGCT GAGGCCGCAG GATGACATCC GCCTGGCAGC CCAGCTGGAG GCACCCCGGC CTCCCCGGCT CCGCTACCTG CTGGTAGTTT 351 CTACACGAGA AGGAGAAGGT CTGAGCCAGG ATGAGACGGT CCTCCTGGGC 401 GTGGATTTCC CTGACAGCAG CTCCCCCAGC TGCACCCTGG GCCTGGTCTT 451 GCCCCTCTGG AGTGACACCC AGGTGTACTT AGATGGAGAC GGGGGCTTCA GCGTGACGTC TGGTGGGCAA AGCCGGATCT TCAAGCCCAT CTCCATCCAG ACCATGTGGG CCACACTCCA GGTATTGCAC CAAGCATGTG AGGCAGCTCT AGGCAGCGGC CTTGTACCGG GTGGCAGTGC CCTCACCTGG GCCAGCCACT ACCAGGAGAG ACTGAACTCC GAACAGAGCT GCCTCAATGA GTGGACGGCT ATGGCCGACC TGGAGTCTCT GCGGCCTCCC AGCGCCGAGC CTGGCGGGTC 751 CTCAGAACAG GAGCAGATGG AGCAGGCGAT CCGTGCTGAG CTGTGGAAAG 801 TGTTGGATGT CAGTGACCTG GAGAGTGTCA CTTCCAAAGA GATCCGCCAG GCTCTGGAGC TGCGCCTGGG GCTCCCCCTC CAGCAGTACC GTGACTTCAT CGACAACCAG ATGCTGCTGC TGGTGGCACA GCGGGACCGA GCCTCCCGCA TCTTCCCCCA CCTCTACCTG GGCTCAGAGT GGAACGCAGC AAACCTGGAG 1001 1101 GAGCTGCAGA GGAACAGGGT CACCCACATC TTGAACATGG CCCGGGAGAT 1151 TGACAACTTC TACCCTGAGC GCTTCACCTA CCACAATGTG CGCCTCTGGG 1201 ATGAGGAGTC GGCCCAGCTG CTGCCGCACT GGAAGGAGAC GCACCGCTTC 1251 ATTGAGGCTG CAAGAGCACA GGGCACCCAC GTGCTGGTCC ACTGCAAGAT 1301 GGGCGTCAGC CGCTCAGCGG CCACAGTGCT GGCCTATGCC ATGAAGCAGT ACGAATGCAG CCTGGAGCAG GCCCTGCGCC ACGTGCAGGA GCTCCGGCCC ATCGCCCGCC CCAACCCTGG CTTCCTGCGC CAGCTGCAGA TCTACCAGGG 1351 CATCCTGACG GCCAGCCGCC AGAGCCATGT CTGGGAGCAG AAAGTGGGTG GGGTCTCCCC AGAGGAGCAC CCAGCCCCTG AAGTCTCTAC ACCATTCCCA 1451 CTTCTTCCGC CAGAACCTGA GGGTGGTGGG GAGGAGAAGG TTGTAGGCAT 1501 GGAAGAGAGC CAGGCAGCCC CGAAAGAAGA GCCTGGGCCA CGGCCACGTA 1551 TAAACCTCCG AGGGGTCATG AGGTCCATCA GTCTTCTGGA GCCCTCCTTG CCACGAGTCT TCACATGAAG AGCCTCTGCA GCCCTTCCCA CAGCTTGCAA 1701 GGACCAAGGG AGGCCAGCAG GTGGACAGGG GGCCTCAGCC TGCCCTGAAG 1751 TCCCGCCAGT CAGTGGTTAC CCTCCAGGGC AGTGCCGTGG TGGCCAACCG 1801 GACCCAGGCC TTCCAGGAGC AGGAGCAGGG GCAGGGGCAG GGGCAGGGAG 1851 AGCCCTGCAT TTCCTCTACG CCCAGGTTCC GGAAGGTGGT GAGACAGGCC AGCGTGCATG ACAGTGGAGA GGAGGGCGAG GCCTGAGCCC TCACACATGC CCACGCTCCC CTGACACTGA AGAGGATCCA CAACTCCTTG GAGAAACACC 2001 CTCACGTCTG TTGCCGCACA CATTCCTCTC AGCTCCGCCC CATACCCGTC 2051 ACTACAGCCT CACCTCCCAC CCCTGTCACT ACGGCCTCAC CTCCCACCCC 2101 TGTCACTACA GCCTCACCTC CTACAGCCTT AAGTCCCAGG CCCATGTCTG 2151 CCTGTCCAAG GGCTCAAGAC TTTCTAACTG GGATGTGGTA GAGGGACTGA 2201 AGGTACCTTT GGGGGCAACA GCACCCTAGT TTCATTCTCA ACTCTAGCCC TGCACACTCA CCTGTGGCAC GGAATGAAAA CAGAGCTTCC CGTGCAAAAA 2301 GGGTCACGCC TCCCACCCCC GCCCCCTCCC TGCACCTCCT GTCCTCTCCC 2351 AGTTCATTCC TGGAACCAGC CAGGCCAGGC AACCAGTGGC CCCCAAAGGC 2501 AGGCAGGATC CTCAGGCCCC AGCCGCGGGA GGCTGGAAGG GCTGGCAGAT 2551 CGCTTCCCTC ATCCACCTCC ACCGGTCCAG GTCTTTGCTG CTGTCCCCAG 2601 ACCTCCTGTG ACACCACGCC AGATCACAGG GCACCAGGCC AGAGATAGTC TTCTTTTTGT CCTTTCTGGC CTCTGGCTAG TCAGTTTTTC ATAGCCTTAC АААААААА ААААААААА АААААААА АААААААА АААААААА ААААААААА АААААААА АААААААА 2751 2801 2851

FEATURES:

5' UTR: 1-56 Start: 57 Stop: 2034 3' UTR: 2037-2852

SPLICE FORM 3:

ICE FO	RM 3:				
1	CCTGGTCCTG	CGGGTCCAGG	ACTGTCCCGC	GGGGTTGAGG	GAAGGGGCCG
51	TGCCCGGTGC	CAGCCCAGGT	GCTCGCGGCC	TGGCTCCATG	GCCCTGGTCA
101	CAGTGAGCCG	TTCGCCCCCG	GGCAGCGGCG	CCTCCACGCC	CGTGGGGCCC
151	TGGGACCAGG	CGGTCCAGCG	AAGGAGTCGA	CTCCAGCGAA	GGCAGAGCTT
201	TGCGGTGCTC	CGTGGGGCTG	TCCTGGGACT	GCAGGATGGA	GGGGACAATG
251	ATGATGCAGC	AGAGGCCAGT	TCTGAGCCAA	CAGAGAAGGC	CCCGAGTGAG
301	GAGGAGCTCC	ACGGGGACCA	GACAGACTTC	GGGCAAGGAT	CCCAGAGTCC
351	CCAGAAGCAG	GAGGAGCAGA	GGCAGCACCT	GCACCTCATG	GTACAGCTGC
401	TGAGGCCGCA	GGATGACATC	CGCCTGGCAG	CCCAGCTGGA	GGCACCCCGG
451	CCTCCCCGGC	TCCGCTACCT	GCTGGTAGTT	TCTACACGAG	AAGGAGAAGG
501	TCTGAGCCAG	GATGAGACGG	TCCTCCTGGG	CGTGGATTTC	CCTGACAGCA
551	GCTCCCCCAG	CTGCACCCTG	GGCCTGGTCT	TGCCCCTCTG	GAGTGACACC
601	CAGGTGTACT	TAGATGGAGA	CGGGGGCTTC	AGCGTGACGT	CTGGTGGGCA
651	AAGCCGGATC	TTCAAGCCCA	TCTCCATCCA	GACCATGTGG	TCCTCAGAAC
701	AGGAGCAGAT	GGAGCAGGCG	ATCCGTGCTG	AGCTGTGGAA	AGTGTTGGAT
751	GTCAGTGACC	TGGAGAGTGT	CACTTCCAAA	GAGATCCGCC	AGGCTCTGGA
801	GCTGCGCCTG	GGGCTCCCCC	TCCAGCAGTA	CCGTGACTTC	ATCGACAACC
851	AGATGCTGCT	GCTGGTGGCA	CAGCGGGACC	GAGCCTCCCG	CATCTTCCCC
901	CACCTCTACC	TGGGCTCAGA	GTGGAACGCA	GCAAACCTGG	AGGAGCTGCA
951	GAGGAACAGG	GTCACCCACA	TCTTGAACAT	GGCCCGGGAG	ATTGACAACT
1001	TCTACCCTGA	GCGCTTCACC	TACCACAATG	TGCGCCTCTG	GGATGAGGAG
1051	TCGGCCCAGC	TGCTGCCGCA	CTGGAAGGAG	ACGCACCGCT	TCATTGAGGC
1101	TGCAAGAGCA	CAGGGCACCC	ACGTGCTGGT	CCACTGCAAG	ATGGGCGTCA
1151	GCCGCTCAGC	GGCCACAGTG	CTGGCCTATG	CCATGAAGCA	GTACGAATGC
1201	AGCCTGGAGC	AGGCCCTGCG	CCACGTGCAG	GAGCTCCGGC	CCATCGCCCG
1251	CCCCAACCCT	GGCTTCCTGC	GCCAGCTGCA	GATCTACCAG	GGCATCCTGA
1301	CGGCCAGAAC	CTGAGGGTGG	TGGGGAGGAG	AAGGTTGTAG	GCATGGAAGA
1351	GAGCCAGGCA	GCCCCGAAAG	AAGAGCCTGG	GGCCACGGGG	CACGTATAAA
1401	CCTCCGAGGG	GTCATGAGGT	CCATCAGTCT	TCTGGAGCCC	TCCTTGGGAG
1451	CTGGAGAGCA	CCTCAGTAGA	CCAGTGACAT	GCCAGAGGTC	TTCTCTTCCC
1501	ACGAGTCTTC	ACATGAAGAG	CCTCTGCAGC	CCTTCCCACA	GCTTGCAAGG
1551	ACCAAGGGAG	GCCAGCAGGT	GGACAGGGGG	CCTCAGCCTG	CCCTGAAGTC
1601	CCGCCAGTCA	GTGGTTACCC	TCCAGGGCAG	TGCCGTGGTG	GCCAACCGGA
1651	CCCAGGCCTT	CCAGGAGCAG	GAGCAGGGGC	AGGGGCAGGG	GCAGGGAGAG
1701	CCCTGCATTT	CCTCTACGCC	CAGGTTCCGG	AAGGTGGTGA	GACAGGCCAG
1751	CGTGCATGAC	AGTGGAGAGG	AGGGCGAGGC	CTGAGCCCTC	ACACATGCCC
1801	ACGCTCCCCT	GACACTGAAG	AGGATCCACA	ACTCCTTGGA	GAAACACCCT
1851	CACGTCTGTT	GCCGCACACA	TTCCTCTCAG	CTCCGCCCCA	TACCCGTCAC
1901	TACAGCCTCA	CCTCCCACCC	CTGTCACTAC	GGCCTCACCT	CCCACCCCTG
1951	TCACTACAGC	CTCACCTCCT	ACAGCCTTAA	GTCCCAGGCC	CATGTCTGCC
2001	TGTCCAAGGG	CTCAAGACTT	TCTAACTGGG	ATGTGGTAGA	GGGACTGAAG
2051	GTACCTTTGG	GGGCAACAGC	ACCCTAGTTT	CATTCTCAAC	TCTAGCCCTG
2101	CACACTCACC			GAGCTTCCCG	
2151	GTCACGCCTC	CCACCCCCGC	CCCCTCCCTG	CACCTCCTGT	CCTCTCCCAG
2201		GAACCAGCCA			
2251		CAGGCCCCAG			
2301		CCACCTCCAC			
2351		ACCACGCCAG			
2401		TTTCTGGCCT			
2451	TATCTGGCTT	TGTACTGAGA	AATAAAACAC	ATTTTCATAT	TTGGTTAAAA
2501	AAAAAAAAA	ААААААААА	AAAAAAAAA	AAAAAAAAA	

FEATURES:

5' UTR: 1-88 Start: 88 Stop: 1311 3' UTR: 1315-2540

Homologous proteins:

Top 10 BLAST Hits		
	Score	E
SPLICE FORM 1:		
gi 8923483 ref NP_060327.1 hypothetical protein FLJ20515 >gi 7	576	e-163
gi 6714641 dbj BAA89534.1 (AB036834) MAP kinase phosphatase [D	337	2e-91
gi 8922777 ref NP_060746.1 hypothetical protein FLJ10928 >gi 7	233	3e-60
gi 7242951 dbj BAA92536.1 (AB037719) KIAA1298 protein [Homo sa	143	4e-33
gi 7301242 gb AAF56372.1 (AE003750) CG6238 gene product [Droso	124	2e-27
gi 4150963 emb CAA77232.1 (Y18620) DsPTP1 protein [Arabidopsis	113	5e-24
gi 9294518 dbj BAB02780.1 (AB023036) dual-specificity protein	113	5e-24
gi 6862915 gb AAF30304.1 AC018907_4 (AC018907) putative dual-sp	94	2e-18
gi 6015037 sp 054838 DUS5_RAT_DUAL_SPECIFICITY_PROTEIN_PHOSPHAT gi 9910432 ref NP_064570.1 mitogen-activated protein kinase_ph	92	9e-18
gijssi0432[fel[NP_064570.1] mitogen-activated protein kinase ph	90	3e-17
SPLICE FORM 2:		
gi 8923483 ref NP 060327.1 hypothetical protein FLJ20515 [Homo	576	e-163
gi 6714641 dbj BAA89534.1 (AB036834) MAP kinase phosphatase [D	340	6e-92
gi 8922777 ref NP 060746.1 hypothetical protein FLJ10928 [Homo	229	1e-58
gi 7242951 dbj BAA92536.1 (AB037719) KIAA1298 protein [Homo sa	162	1e-38
gi 9294518 dbj BAB02780.1 (AB023036) dual-specificity protein	113	8e-24
gi 4150963 emb CAA77232.1 (Y18620) DsPTP1 protein [Arabidopsis	113	8e-24
gi 4758212 ref NP_004411.1 dual specificity phosphatase 8 [Hom	99	3e-19
gi 6679156 ref NP 032774.1 neuronal tyrosine/threonine phospha	96	2e-18
gi 6862915 gb AAF30304.1 AC018907 4 (AC018907) putative dual-sp	94	6e-18
gi 6015037 sp 054838 DUS5_RAT DUAL SPECIFICITY PROTEIN PHOSPHAT	92	2e-17
SPLICE FORM 3:		
gi 8923483 ref NP_060327.1 hypothetical protein FLJ20515 [Homo	410	e-113
gi 8922777 ref NP_060746.1 hypothetical protein FLJ10928 [Homo	233	7e-60
gi 6714641 dbj BAA89534.1 (AB036834) MAP kinase phosphatase [D	224	5e-57
gi 7242951 dbj BAA92536.1 (AB037719) KIAA1298 protein [Homo sa	143	5e-33
gi 9294518 dbj BAB02780.1 (AB023036) dual-specificity protein	113	1e-23
gi 4150963 emb CAA77232.1 (Y18620) DsPTP1 protein [Arabidopsis gi 6862915 gb AAF30304.1 AC018907 4 (AC018907) putative dual-sp	113	1e-23
gi 6015037 sp 054838 DUS5 RAT DUAL SPECIFICITY PROTEIN PHOSPHAT	94 92	5e-18 2e-17
gi 9910432 ref NP 064570.1 mitogen-activated protein kinase ph	90	7e-17
gi 9911130 gb AAA64693.2 (U15932) protein phosphatase [Homo sa	90	le-16
grissition go italio 1050.21 (010502) protein phosphaease (nome sa	50	16 10
BLAST to dbEST:		
SPLICE FORM 1:		
	Score	E
gi 9807071 /dataset=dbest /taxon=960	1404	0.0
gi 10317998 /dataset=dbest /taxon=96	1316	0.0
gi 10151079 /dataset=dbest /taxon=96	1249	0.0
gi 10401153 /dataset=dbest /taxon=960	1180	0.0
gi 10329921 /dataset=dbest /taxon=96	1124	0.0
gi 7632969 /dataset=dbest /taxon=960	791	0.0
gi 9155111 /dataset=dbest /taxon=9606	779	0.0

gi|10994242 /dataset=dbest /taxon=96...

450 e-124

EXPRESSION INFORMATION FOR MODULATORY USE:

SPLICE FORM 1:

library source:

Expression information from BLAST dbEST hits:

gi|9807071 Human Pancreas

gi|10317998 Human colon adenocarcinoma

gi|10151079 Human Pancreas:adenocarcinoma

gi|10401153 Human Pancreas:epitheliod carcinoma

gi|10329921 Human lung: large cell carcinoma

gi|7632969 Human kidney: renal cell carcinoma

gi|9155111 Human Placenta choriocarcinoma

 $gi \mid 10994242$ Human ovary tumor tissue

Expression information from PCR-based tissue screening panels:

Human Brain

Human Fetal brain

Human fetal heart

Human fetal kidney

Human heart

Human kidney

Human uterus

Human thyroid

SPLICE FORM 1: 1 MALVTVSRSP PGSGASTPVG PWDQAVQRRS RLQRRQSFAV LRGAVLGLQD 51 GGDNDDAAEA SSEPTEKAPS EEELHGDQTD FGQGSQSPQK QEEQRQHLHL 101 MVQLLRPQDD IRLAAQLEAP RPPRLRYLLV VSTREGEGLS QDETVLLGVD 151 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIQTM 201 WATLQVLHQA CEAALGSGLV PGGSALTWAS HYQERLNSEQ SCLNEWTAMA 251 DLESLRPPSA EPGGSSEQEQ MEQAIRAELW KVLDVSDLES VTSKEIRQAL 301 ELRLGLPLOQ YRDFIDNOML LLVAQRDRAS RIFPHLYLGS EWNAANLEEL 351 QRNRVTHILN MAREIDNFYP ERFTYHNVRL WDEESAQLLP HWKETHRFIE 401 AARAQGTHVL VHCKMGVSRS AATVLAYAMK QYECSLEQAL RHVQELRPIA 451 RPNPGFLRQL QIYQGILTAR T (BERTH WO. 4) SPLICE FORM 2: 1 MALVTVSRSP PGSGASTPVG PWDQAVQRRS RLQRRQSFAV LRGAVLGLQD GGDNDDAAEA SSEPTEKAPS EEELHGDOTD FGOGSOSPOK OEEOROHLHL 101 MVQLLRPQDD IRLAAQLEAP RPPRLRYLLV VSTREGEGLS QDETVLLGVD 151 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIQTM 201 WATLQVLHQA CEAALGSGLV PGGSALTWAS HYQERLNSEQ SCLNEWTAMA 251 DLESLRPPSA EPGGSSEQEQ MEQAIRAELW KVLDVSDLES VTSKEIRQAL 301 ELRLGLPLQQ YRDFIDNQML LLVAQRDRAS RIFPHLYLGS EWNAANLEEL 351 QRNRVTHILN MAREIDNFYP ERFTYHNVRL WDEESAQLLP HWKETHRFIE 401 AARAQGTHVL VHCKMGVSRS AATVLAYAMK QYECSLEQAL RHVQELRPIA 451 RPNPGFLRQL QIYQGILTAS RQSHVWEQKV GGVSPEEHPA PEVSTPFPLL 501 PPEPEGGGEE KVVGMEESQA APKEEPGPRP RINLRGVMRS ISLLEPSLEL 551 ESTSETSDMP EVFSSHESSH EEPLQPFPQL ARTKGGQQVD RGPQPALKSR 601 QSVVTLQGSA VVANRTQAFQ EQEQGQGQGQ GEPCISSTPR FRKVVRQASV 651 HDSGEEGEA (SEQ 3D NO.5) SPLICE FORM 3:

- 1 MALVTVSRSP PGSGASTPVG PWDQAVQRRS RLQRRQSFAV LRGAVLGLQD 51 GGDNDDAAEA SSEPTEKAPS EEELHGDQTD FGQGSQSPQK QEEQRQHLHL 101 MVQLLRPQDD IRLAAQLEAP RPPRLRYLLV VSTREGEGLS QDETVLLGVD 151 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIQTM 201 WSSEQEQMEQ AIRAELWKVL DVSDLESVTS KEIRQALELR LGLPLQQYRD 251 FIDNQMLLLV AQRDRASRIF PHLYLGSEWN AANLEELQRN RVTHILNMAR 301 EIDNFYPERF TYHNVRLWDE ESAQLLPHWK ETHRFIEAAR AQGTHVLVHC 351 KMGVSRSAAT VLAYAMKQYE CSLEQALRHV QELRPIARPN PGFLRQLQIY
- 401 QGILTART

(SECTO NO:6)

FEATURES:

Functional domains and key regions: SPLICE FORM 1:

[1] PDOC00004 PS00004 CAMP PHOSPHO SITE cAMP- and cGMP-dependent protein kinase phosphorylation site

34-37 RRQS

[2] PDOC00005 PS00005 PKC PHOSPHO SITE Protein kinase C phosphorylation site

```
Number of matches: 6
              65-67 TEK
      1
      2
           132-134 STR
      3
           254-256 SLR
      4
           292-294 TSK
      5
           395-397 THR
            468-470 TAR
```

[3] PDOC00006 PS00006 CK2_PHOSPHO_SITE Casein kinase II phosphorylation site

```
Number of matches: 6
1 70-73 SEEE
2 132-135 STRE
3 140-143 SQDE
4 266-269 SEQE
5 286-289 SDLE
6 292-295 TSKE
```

[4] PDOC00007 PS00007 TYR_PHOSPHO_SITE Tyrosine kinase phosphorylation site

363-369 REIDNFY

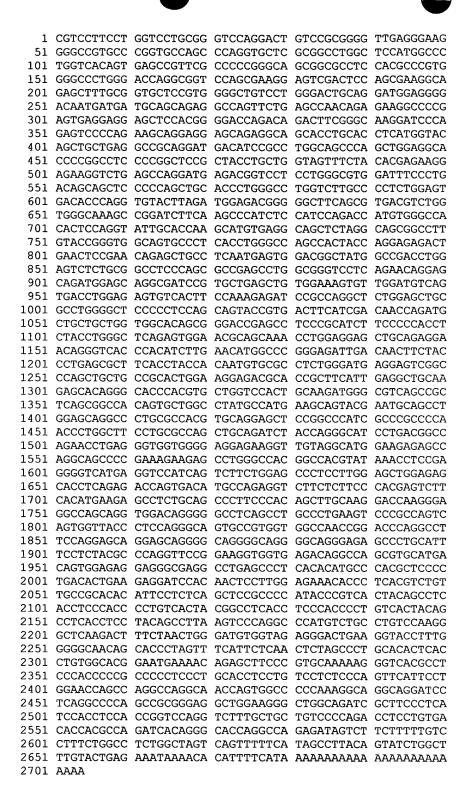
[5] PDOC00008 PS00008 MYRISTYL
N-myristoylation site

Number of	matches:	8
1	12-17	GSGAST
2	43-48	GAVLGL
3	47-52	GLQDGG
4	218-223	GLVPGG
5	223-228	GSALTW
6	339-344	GSEWNA
7	416-421	GVSRSA
8	465-470	GILTAR

```
BLAST Alignment to Top Hit:
SPLICE FORM 1:
>gi|8923483|ref|NP 060327.1| hypothetical protein FLJ20515
          >gi|7020674|dbj|BAA91228.1| (AK000522) unnamed protein
          product [Homo sapiens]
          Length = 394
 Score = 576 \text{ bits } (1469), \text{ Expect = } e-163
 Identities = 290/312 (92%), Positives = 296/312 (93%), Gaps = 1/312 (0%)
          MALVTVSRSPPGSGASTPVGPWDQAVQRRSRLQRRQSFAVLRGAVLGLQDGGDNDDAAEA 60
Query: 1
          MALVTVSRSPPGSGASTPVGPWDQAVQRRSRLQRRQSFAVLRGAVLGLQDGGDNDDAAEA
Sbjct: 1
          MALVTVSRSPPGSGASTPVGPWDQAVQRRSRLQRRQSFAVLRGAVLGLQDGGDNDDAAEA 60
Query: 61
          SSEPTEKAPSEEELHGDQTDFGQGSQSPQKQEEQRQHLHLMVQLLRPQDDIRLAAQLEAP 120
          SSEPTEKAPSEEELHGDQTDFGQGSQSPQKQEEQRQHLHLMVQLLRPQDDIRLAAQLEAP
Sbjct: 61 SSEPTEKAPSEEELHGDQTDFGQGSQSPQKQEEQRQHLHLMVQLLRPQDDIRLAAQLEAP 120
Query: 121 RPPRLRYLLVVSTREGEGLSQDETVLLGVDFPDSSSPSCTLGLVLPLWSDTQVYLDGDGG 180
          RPPRLRYLLVVSTREGEGLSQDETVLLGVDFPDSSSPSCTLGLVLPLWSDTQVYLDGDGG
Sbjct: 121 RPPRLRYLLVVSTREGEGLSQDETVLLGVDFPDSSSPSCTLGLVLPLWSDTQVYLDGDGG 180
Query: 181 FSVTSGGQSRIFKPISIQTMWATLQVLHQACEAALGSGLVPGGSALTWASHYQERLNSEQ 240
          FSVTSGGQSRIFKPISIQTMWATLQVLHQACEAALGSGLVPGGSALTWASHYQERLNSEQ
Sbjct: 181 FSVTSGGQSRIFKPISIQTMWATLQVLHQACEAALGSGLVPGGSALTWASHYQERLNSEQ 240
Query: 241 SCLNEWTAMADLESLRPPSAEPGGSSEQEQMEQAIRAELWKVLDV-SDLESVTSKEIRQA 299
          SCLNEWTAMADLESLRPPSAEPGGSSEQEQMEQAIRAELWKVL++ S E+
Sbjct: 241 SCLNEWTAMADLESLRPPSAEPGGSSEQEQMEQAIRAELWKVLELESTSETSDMPEVFSS 300
Query: 300 LELRLGLPLQQY 311
                PLO +
           Ε
Sbjct: 301 HESSHEEPLQPF 312
>gi|6714641|dbj|BAA89534.1| (AB036834) MAP kinase phosphatase
          [Drosophila melanogaster]
          Length = 1045
 Score = 337 bits (854), Expect = 2e-91
 Identities = 204/537 (37%), Positives = 284/537 (51%), Gaps = 81/537 (15%)
Query: 1
          MALVTVSRSPPGSGA-STPVGPWDQAVQRRSRLQRRQSFAVLRGAVLGLQDGGDNDDAAE 59
          MALVTV RSP +G+ S G +
                                           R + F
                                                  +G L L
Sbjct: 1
          MALVTVQRSPSVAGSCSNSDGESEDDEGNSKGNDRSECFFAGKGTALVL----- 49
Query: 60 ASSEPTEKAPSEEELHGDQTDFGQGSQSPQKQEEQRQHLHLMVQLLRPQDDIRLAAQLEA 119
                   SE L D T
                                 +QS
                                          + + HL M LL+ +D +++A +LE+
Sbjct: 50 ALKDIPPLTQSERRLSTDSTRSSNSTQS--NNSDIQLHLQSMFYLLQREDTLKMAVKLES 107
Query: 120 PRPPRLRYLLV------ 158
           R R RYL++
                               S R
                                     + + +V +G
Sbjct: 108 QRSNRTRYLVIASRSCCRSGTSDRRRHRIMRHHSVKVGGSAGTKSSTSPAVPTQRQLSVE 167
Query: 159 -----VLPLWSDTQVY 174
                                           C LG+
                                                         V+P+ +DT ++
Sbjct: 168 QTATEASSKCDKTADKENATAAGDNKNTSGMEESCLLGIDCNERTTIGLVVPILADTTIH 227
Query: 175 LDGDGGFSVTSGGQSRIFKPISIQTMWATLQVLHQACEAALGSGLVPGGSALTWASHYQE 234
          LDGDGGFSV
                       ++ IFKP+S+Q MW+ LQ LH+ + A +
                                                      G + W S Y+
Sbjct: 228 LDGDGGFSVKVYEKTHIFKPVSVQAMWSALQTLHKVSKKARENNFYASGPSHDWLSSYER 287
```



Sbjct: 91 AATVLAYAMKQYECSLEQALRHVQELRPIARPNPGFLRQLQIYQGILTART 141



FEATURES:

Start: 94

Exon: 94-1506 Stop: 1507



CHROMOSOME MAP POSITION:

Bac accession number: AP001885

Chromosome #: 11

ALLELIC VARIANTS (SNPs):

DNA				Protein		
Position	Major	Minor	Domain	Position	Major	Minor
577	G	A	Exon	162	G	S
1451	G	Α	Exon	453	S	N
2641	G	Α	Beyond ORF(3')			

Context:

DNA

Position

577

1451

ACAGGGTCACCCACATCTTGAACATGGCCCGGGAGATTGACAACTTCTACCCTGAGCGCT TCACCTACCACAATGTGCGCCTCTGGGATGAGGAGTCGGCCCAGCTGCTGCCGCACTGGA AGGAGACGCACCGCTTCATTGAGGCTGCAAGAGCACAGGGCACCCACGTGCTGGTCCACT GCAAGATGGGCGTCAGCCGCTCAGCGGCCACAGTGCTGGCCTATGCCATGAAGCAGTACG AATGCAGCCTGGAGCAGGCCCTGCGCCACGTGCAGGAGCTCCGGCCCATCGCCCCCCA [G, A]

CCCTGGCTTCCTGCGCCAGCTGCAGATCTACCAGGGCATCCTGACGGCCAGAACCTGAGG GTGGTGGGGAGAAGGTTGTAGGCATGGAAGAGGGCCAGGCAGCCCCGAAAGAAGAG CTGGGCCACGGCCACGTATAAACCTCCGAGGGGTCATGAGGTCCATCAGTCTTCTGGAGC CCTCCTTGGAGCTGGAGAGCACCTCAGAGACCAGTGACATGCCAGAGGTCTTCTCTTCCC ACGAGTCTTCACATGAAGAGCCTCTGCAGCCCTTCCCACAGCTTGCAAGGACCAAGGGAG

2641

GGTCACGCCTCCCACCCCGCCCCCTCCTGCACCTCCTGTCCTCTCCCAGTTCATTCCT GGAACCAGCCAGGCAACCAGTGGCCCCCAAAGGCAGGATCCTCAGGCCCCA GCCGCGGGAGGCTGGAAGGGCTGGCAGATCGCTTCCCTCATCCACCTCCACCGGTCCAGG TCTTTGCTGCTGTCCCCAGACCTCCTGTGACACCACGCCAGATCACAGGGCACCAGGCCA GAGATAGTCTTCTTTTTGTCCTTTCTGGCCTCTGGCTAGTCAGTTTTTCATAGCCTTACA [G, A]

GENE STRUCTURE MODEL:

SPLICE FORM 2	5'-e1-e2-e3-e4-e5-e6-e7-e8-e9-e10-e11-e12-e13-e14-3'
SPLICE FORM 1	5'-e1-e2-e3-e4-e5-e6-e7-e8-e9-e10-e11-e123'
SPLICE FORM 3	5'-e1-e2-e3-e4-e5-e6e8-e9-e10-e11-e123'

MULTIPLE ALIGNMENT OF CDNA SEQUENCES:

SPLICE	FORM	2	~~~~~~	~~~~~~~	~~~~~~~	~~~~~TG	GTTGAGGGAA
SPLICE	FORM	1	CGTCCTTCCT	GGTCCTGCGG	GTCCAGGACT	${\tt GT.CCGCGGG}$	GTTGAGGGAA
SPLICE	FORM	3	~~~~~CCT	GGTCCTGCGG	GTCCAGGACT	GTCCCGCGG	GTTGAGGGAA

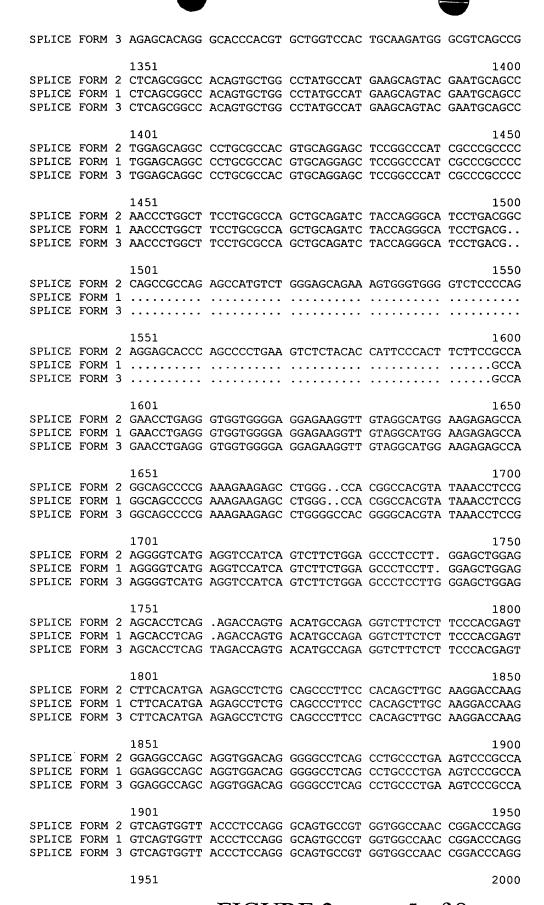
51 10

SPLICE FORM 2 GGGGCCGTGC CCGGTGCCAG CCCAGGTGCT CGCGGCCTGG CTCCATGGCC

							_
						CGCGGCCTGG CGCGGCCTGG	-
SPLICE	FORM	1	CTGGTCACAG	TGAGCCGTTC	GCCCCGGGC	AGCGGCGCCT AGCGGCGCCT AGCGGCGCCT	CCACGCCCGT
SPLICE	FORM	1	GGGGCCCTGG	GACCAGGCGG	TCCAGCGAAG	GAGTCGACTC GAGTCGACTC GAGTCGACTC	CAGCGAAGGC
SPLICE	FORM	1	AGAGCTTTGC	GGTGCTCCGT	GGGGCTGTCC	TGGGACTGCA TGGGACTGCA TGGGACTGCA	GGATGGAGGG
SPLICE	FORM	1	GACAATGATG	ATGCAGCAGA	GGCCAGTTCT	GAGCCAACAG GAGCCAACAG GAGCCAACAG	AGAAGGCCCC
SPLICE	FORM	1	GAGTGAGGAG	GAGCTCCACG	GGGACCAGAC	AGACTTCGGG AGACTTCGGG AGACTTCGGG	CAAGGATCCC
SPLICE	FORM	1	AGAGTCCCCA	GAAGCAGGAG	GAGCAGAGGC	AGCACCTGCA AGCACCTGCA AGCACCTGCA	CCTCATGGTA
SPLICE	FORM	1	CAGCTGCTGA	GGCCGCAGGA	TGACATCCGC	CTGGCAGCCC CTGGCAGCCC CTGGCAGCCC	AGCTGGAGGC
SPLICE	FORM	1	ACCCCGGCCT	CCCCGGCTCC	GCTACCTGCT	GGTAGTTTCT GGTAGTTTCT GGTAGTTTCT	ACACGAGAAG
SPLICE	FORM	1	GAGAAGGTCT	GAGCCAGGAT	GAGACGGTCC	TCCTGGGCGT TCCTGGGCGT TCCTGGGCGT	GGATTTCCCT
SPLICE	FORM	1	GACAGCAGCT	CCCCCAGCTG	CACCCTGGGC	CTGGTCTTGC CTGGTCTTGC CTGGTCTTGC	CCCTCTGGAG
SPLICE	FORM	1	TGACACCCAG	GTGTACTTAG	ATGGAGACGG	GGGCTTCAGC GGGCTTCAGC GGGCTTCAGC	GTGACGTCTG
SPLICE	FORM	1	GTGGGCAAAG	CCGGATCTTC	AAGCCCATCT	CCATCCAGAC CCATCCAGAC CCATCCAGAC	CATGTGGGCC

SPLICE	FORM	1	ACACTCCAGG	TATTGCACCA	AGCATGTGAG	GCAGCTCTAG GCAGCTCTAG	GCAGCGGCCT
SPLICE	FORM	3	• • • • • • • • • • • • • • • • • • • •		• • • • • • • • •	• • • • • • • • •	• • • • • • • • • •
SPLICE	FORM	2	751 TGTACCGGGT	GGCAGTGCCC	TCACCTGGGC	CAGCCACTAC	800 CAGGAGAGAC
						CAGCCACTAC	
			004				
SPLICE	FORM	1		ACAGAGCTGC	CTCAATGAGT	GGACGGCTAT GGACGGCTAT	
012102	LOIUI	٠	•••••		• • • • • • • • • •	•••••	• • • • • • • • • • • • • • • • • • • •
SPLICE	FORM	1	${\tt GAGTCTCTGC}$	GGCCTCCCAG	CGCCGAGCCT	GGCGGGTCCT GGCGGGTCCT GGTCCT	CAGAACAGGA
			901				950
SPLICE	FORM	1	GCAGATGGAG GCAGATGGAG	CAGGCGATCC	GTGCTGAGCT	GTGGAAAGTG GTGGAAAGTG GTGGAAAGTG	TTGGATGTCA TTGGATGTCA
			0.51				1000
SPLICE	FORM	1	GTGACCTGGA	GAGTGTCACT	TCCAAAGAGA	TCCGCCAGGC TCCGCCAGGC TCCGCCAGGC	TCTGGAGCTG
			1001				
SPLICE	FORM	2	1001	ጥሮርርርርጥርርል	CCACTACCCT	GACTTCATCG	1050
						GACTTCATCG	
SPLICE	FORM	3	CGCCTGGGGC	TCCCCCTCCA	GCAGTACCGT	GACTTCATCG	ACAACCAGAT
			1051				
SDITCE	FODM	2	1051	CTCCCACACC	CCCACCCACC	CTCCCGCATC	1100
						CTCCCGCATC	
						CTCCCGCATC	
SPLICE	FORM	2	1101	СТСАСАСТСС	AACGCAGCAA	ACCTGGAGGA	1150
						ACCTGGAGGA	
						ACCTGGAGGA	
		_	1151				1200
						CGGGAGATTG CGGGAGATTG	
						CGGGAGATTG	
CDITCE	FODM	2	1201	TTCACCTACC	A CA A MCMCCC	CCTCTGGGAT	1250
						CCTCTGGGAT	
						CCTCTGGGAT	
			1051				4000
SPLICE	FORM	2	1251	GCCGCACTGG	AACCACACCC	ACCGCTTCAT	1300
						ACCGCTTCAT	
						ACCGCTTCAT	
			1301				1250
SPLICE	FORM	2		GCACCCACGT	GCTGGTCCAC	TGCAAGATGG	1350 GCGTCAGCCG
						TGCAAGATGG	

FIGURE 3, page 4 of 8



SPLICE FO	ORM 1	CCTTCCAGGA CCTTCCAGGA CCTTCCAGGA	GCAGGAGCAG	GGGCAGGGGC	AGGGCAGGG	AGAGCCCTGC
SPLICE FO	ORM 1	2001 ATTTCCTCTA ATTTCCTCTA ATTTCCTCTA	${\tt CGCCCAGGTT}$	${\tt CCGGAAGGTG}$	${\tt GTGAGACAGG}$	CCAGCGTGCA
SPLICE FO	ORM 1	2051 TGACAGTGGA TGACAGTGGA TGACAGTGGA	GAGGAGGCG	AGGCCTGAGC	CCTCACACAT	GCCCACGCTC
SPLICE FO	ORM 1	2101 CCCTGACACT CCCTGACACT CCCTGACACT	GAAGAGGATC	CACAACTCCT	TGGAGAAACA	CCCTCACGTC
SPLICE FO	ORM 1	2151 TGTTGCCGCA TGTTGCCGCA TGTTGCCGCA	${\tt CACATTCCTC}$	${\tt TCAGCTCCGC}$	CCCATACCCG	TCACTACAGC
SPLICE FO	ORM 1	2201 CTCACCTCCC CTCACCTCCC CTCACCTCCC	ACCCCTGTCA	${\tt CTACGGCCTC}$	ACCTCCCACC	CCTGTCACTA
SPLICE FO	ORM 1	2251 CAGCCTCACC CAGCCTCACC CAGCCTCACC	TCCTACAGCC	TTAAGTCCCA	GGCCCATGTC	TGCCTGTCCA
SPLICE FO	ORM 1	2301 AGGGCTCAAG AGGGCTCAAG	ACTTTCTAAC	TGGGATGTGG	TAGAGGGACT	GAAGGTACCT
SPLICE FO	ORM 1	2351 TTGGGGGCAA TTGGGGGCAA TTGGGGGCAA	CAGCACCCTA	${\tt GTTTCATTCT}$	CAACTCTAGC	CCTGCACACT
SPLICE FO	ORM 1	2401 CACCTGTGGC CACCTGTGGC CACCTGTGGC	ACGGAATGAA	AACAGAGCTT	CCCGTGCAAA	AAGGGTCACG
SPLICE FO	ORM 1	2451 CCTCCCACCC CCTCCCACCC CCTCCCACCC	CCGCCCCCTC	CCTGCACCTC	CTGTCCTCTC	CCAGTTCATT
SPLICE FO	ORM 1	2501 CCTGGAACCA CCTGGAACCA	GCCAGGCCAG	GCAACCAGTG	GCCCCCAAAG	GCAGGCAGGA
SPLICE FO	ORM 1	2551 TCCTCAGGCC TCCTCAGGCC TCCTCAGGCC	CCAGCCGCGG	GAGGCTGGAA	GGGCTGGCAG	ATCGCTTCCC

					AGGTCTTTGC AGGTCTTTGC		
			TCATCCACCT		AGGTCTTTGC		
SPLICE	FORM	2	2651 TGACACCACG	CCAGATCACA	GGGCACCAGG	CCAGAGATAG	2700 TCTTCTTTTT
					GGGCACCAGG GGGCACCAGG		
CDI TOD	DODM	2	2701	COCHORCOOM	n cman cmmmm	man ma caamm	2750
SPLICE	FORM	1	${\tt GTCCTTTCTG}$	GCCTCTGGCT	AGTCAGTTTT AGTCAGTTTT	TCATAGCCTT	ACAGTATCTG
SPLICE	FORM	3	GTCCTTTCTG	GCCTCTGGCT	AGTCAGTTTT	TCATAGCCTT	ACAGTATCTG
		_	2751				2800
					ACACATTTTC ACACATTTTC		
					ACACATTTTC		
			2801				2850
			AAAAAAAA		AAAAAAAAA		
					AAAAAAAAAA		~~~~~~
			2851				2894
			AAAAAAAA	AAAAAAAAA	AAAAAAAAA	ААААААААА	AAAA
SPLICE SPLICE		_		~~~~~~~	~~~~~~~	~~~~~~~	~~~~
MULTIP	.F AT.	r C B	MENT OF PE	ייידור פיירוניים	JCFC.		
	w Au.	LGL	***** OF FEE	TIDE SEQUE	ACES.		
SPLICE	FORM	2	MALVTVSRSP	PGSGASTPVG	PWDQAVQRRS		
SPLICE SPLICE	FORM FORM	2 1	MALVTVSRSP MALVTVSRSP	PGSGASTPVG PGSGASTPVG	PWDQAVQRRS PWDQAVQRRS	RLQRRQSFAV	LRGAVLGLQD
SPLICE SPLICE	FORM FORM	2 1	MALVTVSRSP MALVTVSRSP	PGSGASTPVG PGSGASTPVG	PWDQAVQRRS	RLQRRQSFAV	LRGAVLGLQD
SPLICE SPLICE SPLICE	FORM FORM FORM	2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP	PGSGASTPVG PGSGASTPVG PGSGASTPVG	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS	RLQRRQSFAV RLQRRQSFAV	LRGAVLGLQD LRGAVLGLQD
SPLICE SPLICE SPLICE SPLICE	FORM FORM FORM	2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD	RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL
SPLICE SPLICE SPLICE SPLICE SPLICE	FORM FORM FORM FORM	2 1 3 2 1	MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA GGDNDDAAEA	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD EEELHGDQTD	RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL
SPLICE SPLICE SPLICE SPLICE SPLICE	FORM FORM FORM FORM	2 1 3 2 1	MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA GGDNDDAAEA GGDNDDAAEA	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD	RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL
SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE	FORM FORM FORM FORM FORM	2 1 3 2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA GGDNDDAAEA GGDNDDAAEA	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS SSEPTEKAPS	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD EEELHGDQTD EEELHGDQTD	RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK FGQGSQSPQK	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL
SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE	FORM FORM FORM FORM FORM	2 1 3 2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA GGDNDDAAEA GGDNDDAAEA 101 MVQLLRPQDD	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS SSEPTEKAPS	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD EEELHGDQTD EEELHGDQTD	RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK FGQGSQSPQK VSTREGEGLS	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL 150 QDETVLLGVD
SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE	FORM FORM FORM FORM FORM FORM	2 1 3 2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA GGDNDDAAEA GGDNDDAAEA 101 MVQLLRPQDD MVQLLRPQDD	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS SSEPTEKAPS IRLAAQLEAP IRLAAQLEAP	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD EEELHGDQTD EEELHGDQTD	RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK FGQGSQSPQK VSTREGEGLS VSTREGEGLS	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL QDETVLLGVD QDETVLLGVD
SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE	FORM FORM FORM FORM FORM FORM	2 1 3 2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA GGDNDDAAEA GGDNDDAAEA 101 MVQLLRPQDD MVQLLRPQDD	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS SSEPTEKAPS IRLAAQLEAP IRLAAQLEAP	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD EEELHGDQTD EEELHGDQTD RPPRLRYLLV RPPRLRYLLV	RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK FGQGSQSPQK VSTREGEGLS VSTREGEGLS	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL QDETVLLGVD QDETVLLGVD
SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE	FORM FORM FORM FORM FORM FORM FORM	2 1 3 2 1 3 2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA GGDNDDAAEA GGDNDDAAEA 101 MVQLLRPQDD MVQLLRPQDD MVQLLRPQDD 151 FPDSSSPSCT	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS SSEPTEKAPS IRLAAQLEAP IRLAAQLEAP IRLAAQLEAP	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD EEELHGDQTD EEELHGDQTD RPPRLRYLLV RPPRLRYLLV RPPRLRYLLV	RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK FGQGSQSPQK VSTREGEGLS VSTREGEGLS VSTREGEGLS	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL QDETVLLGVD QDETVLLGVD QDETVLLGVD QDETVLLGVD
SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE	FORM FORM FORM FORM FORM FORM FORM FORM	2 1 3 2 1 3 2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA GGDNDDAAEA GGDNDDAAEA 101 MVQLLRPQDD MVQLLRPQDD MVQLLRPQDD 151 FPDSSSPSCT FPDSSSPSCT	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS SSEPTEKAPS IRLAAQLEAP IRLAAQLEAP IRLAAQLEAP	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD EEELHGDQTD EEELHGDQTD RPPRLRYLLV RPPRLRYLLV RPPRLRYLLV TQVYLDGDGG TQVYLDGDGG	RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK FGQGSQSPQK VSTREGEGLS VSTREGEGLS VSTREGEGLS FSVTSGGQSR FSVTSGGQSR	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL QDETVLLGVD QDETVLLGVD QDETVLLGVD QDETVLLGVD 1FKPISIQTM 1FKPISIQTM
SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE	FORM FORM FORM FORM FORM FORM FORM FORM	2 1 3 2 1 3 2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA GGDNDDAAEA GGDNDDAAEA 101 MVQLLRPQDD MVQLLRPQDD MVQLLRPQDD 151 FPDSSSPSCT FPDSSSPSCT	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS SSEPTEKAPS IRLAAQLEAP IRLAAQLEAP IRLAAQLEAP	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD EEELHGDQTD EEELHGDQTD RPPRLRYLLV RPPRLRYLLV RPPRLRYLLV	RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK FGQGSQSPQK VSTREGEGLS VSTREGEGLS VSTREGEGLS FSVTSGGQSR FSVTSGGQSR	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL QDETVLLGVD QDETVLLGVD QDETVLLGVD QDETVLLGVD 1FKPISIQTM 1FKPISIQTM
SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE SPLICE	FORM FORM FORM FORM FORM FORM FORM FORM	2 1 3 2 1 3 2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA GGDNDDAAEA GGDNDDAAEA 101 MVQLLRPQDD MVQLLRPQDD MVQLLRPQDD T51 FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS IRLAAQLEAP IRLAAQLEAP IRLAAQLEAP IRLAAQLEAP LGLVLPLWSD LGLVLPLWSD	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD EEELHGDQTD EEELHGDQTD RPPRLRYLLV RPPRLRYLLV RPPRLRYLLV TQVYLDGDGG TQVYLDGDGG TQVYLDGDGG	RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK FGQGSQSPQK VSTREGEGLS VSTREGEGLS VSTREGEGLS FSVTSGGQSR FSVTSGGQSR FSVTSGGQSR	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL QDETVLLGVD QDETVLLGVD QDETVLLGVD QDETVLLGVD 1FKPISIQTM 1FKPISIQTM 1FKPISIQTM 250
SPLICE	FORM FORM FORM FORM FORM FORM FORM FORM	2 1 3 2 1 3 2 1 3 2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA GGDNDDAAEA GGDNDDAAEA 101 MVQLLRPQDD MVQLLRPQDD MVQLLRPQDD 151 FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS SSEPTEKAPS IRLAAQLEAP IRLAAQLEAP IRLAAQLEAP LGLVLPLWSD LGLVLPLWSD LGLVLPLWSD	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD EEELHGDQTD EEELHGDQTD RPPRLRYLLV RPPRLRYLLV RPPRLRYLLV TQVYLDGDGG TQVYLDGDGG TQVYLDGDGG TQVYLDGDGG	RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK FGQGSQSPQK VSTREGEGLS VSTREGEGLS VSTREGEGLS FSVTSGGQSR FSVTSGGQSR FSVTSGGQSR HYQERLNSEQ	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL QDETVLLGVD QDETVLLGVD QDETVLLGVD QDETVLLGVD 1FKPISIQTM 1FKPISIQTM 1FKPISIQTM 250 SCLNEWTAMA
SPLICE	FORM FORM FORM FORM FORM FORM FORM FORM	2 1 3 2 1 3 2 1 3 2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP S1 GGDNDDAAEA GGDNDDAAEA GGDNDDAAEA 101 MVQLLRPQDD MVQLLRPQDD MVQLLRPQDD T51 FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS SSEPTEKAPS IRLAAQLEAP IRLAAQLEAP IRLAAQLEAP LGLVLPLWSD LGLVLPLWSD LGLVLPLWSD CEAALGSGLV CEAALGSGLV	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD EEELHGDQTD EEELHGDQTD RPPRLRYLLV RPPRLRYLLV RPPRLRYLLV TQVYLDGDGG TQVYLDGDGG TQVYLDGDGG	RLQRRQSFAV RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK VSTREGEGLS VSTREGEGLS VSTREGEGLS VSTREGEGLS FSVTSGGQSR FSVTSGGQSR FSVTSGGQSR HYQERLNSEQ HYQERLNSEQ	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL QDETVLLGVD QDETVLLGVD QDETVLLGVD IFKPISIQTM IFKPISIQTM IFKPISIQTM IFKPISIQTM SCLNEWTAMA
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SPLICE	FORM FORM FORM FORM FORM FORM FORM FORM	2 1 3 2 1 3 2 1 3 2 1 3 2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA GGDNDDAAEA GGDNDDAAEA 101 MVQLLRPQDD MVQLLRPQDD MVQLLRPQDD 151 FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT 201 WATLQVLHQA WATLQVLHQA WATLQVLHQA W	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS SSEPTEKAPS IRLAAQLEAP IRLAAQLEAP IRLAAQLEAP LGLVLPLWSD LGLVLPLWSD LGLVLPLWSD CEAALGSGLV CEAALGSGLV CEPGGSSEQEQ	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD EEELHGDQTD EEELHGDQTD RPPRLRYLLV RPPRLRYLLV RPPRLRYLLV TQVYLDGDGG TQVYLDGDGG TQVYLDGDGG TQVYLDGDGG PGGSALTWAS PGGSALTWAS PGGSALTWAS	RLQRRQSFAV RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK VSTREGEGLS VSTREGEGLS VSTREGEGLS VSTREGEGLS FSVTSGGQSR FSVTSGGQSR FSVTSGGQSR HYQERLNSEQ HYQERLNSEQ KVLDVSDLES	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL 150 QDETVLLGVD QDETVLLGVD QDETVLLGVD IFKPISIQTM IFKPISIQTM IFKPISIQTM SCLNEWTAMA SCLNEWTAMA
SPLICE	FORM FORM FORM FORM FORM FORM FORM FORM	2 1 3 2 1 3 2 1 3 2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA GGDNDDAAEA GGDNDDAAEA 101 MVQLLRPQDD MVQLLRPQDD MVQLLRPQDD 151 FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT 201 WATLQVLHQA WATLQVLHQA WATLQVLHQA W	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS SSEPTEKAPS IRLAAQLEAP IRLAAQLEAP IRLAAQLEAP LGLVLPLWSD LGLVLPLWSD LGLVLPLWSD CEAALGSGLV CEAALGSGLV CEAALGSGLV EPGGSSEQEQ EPGGSSEQEQ	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD EEELHGDQTD EEELHGDQTD RPPRLRYLLV RPPRLRYLLV RPPRLRYLLV TQVYLDGDGG TQVYLDGDGG TQVYLDGDGG TQVYLDGDGG TQVYLDGDGG TQVYLDGDGG TQVYLDGDGG MEGSALTWAS PGGSALTWAS PGGSALTWAS	RLQRRQSFAV RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK FGQGSQSPQK VSTREGEGLS VSTREGEGLS VSTREGEGLS FSVTSGGQSR FSVTSGGQSR FSVTSGGQSR HYQERLNSEQ HYQERLNSEQ HYQERLNSEQ KVLDVSDLES KVLDVSDLES	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL 150 QDETVLLGVD QDETVLLGVD QDETVLLGVD IFKPISIQTM IFKPISIQTM IFKPISIQTM SCLNEWTAMA SCLNEWTAMA SCLNEWTAMA VTSKEIRQAL
SPLICE	FORM FORM FORM FORM FORM FORM FORM FORM	2 1 3 2 1 3 2 1 3 2 1 3	MALVTVSRSP MALVTVSRSP MALVTVSRSP MALVTVSRSP 51 GGDNDDAAEA GGDNDDAAEA GGDNDDAAEA 101 MVQLLRPQDD MVQLLRPQDD MVQLLRPQDD 151 FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT FPDSSSPSCT 201 WATLQVLHQA WATLQVLHQA WATLQVLHQA W	PGSGASTPVG PGSGASTPVG PGSGASTPVG SSEPTEKAPS SSEPTEKAPS SSEPTEKAPS IRLAAQLEAP IRLAAQLEAP IRLAAQLEAP LGLVLPLWSD LGLVLPLWSD LGLVLPLWSD CEAALGSGLV CEAALGSGLV CEAALGSGLV EPGGSSEQEQ EPGGSSEQEQ	PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS PWDQAVQRRS EEELHGDQTD EEELHGDQTD EEELHGDQTD RPPRLRYLLV RPPRLRYLLV RPPRLRYLLV TQVYLDGDGG TQVYLDGDGG TQVYLDGDGG TQVYLDGDGG PGGSALTWAS PGGSALTWAS PGGSALTWAS	RLQRRQSFAV RLQRRQSFAV RLQRRQSFAV FGQGSQSPQK FGQGSQSPQK FGQGSQSPQK VSTREGEGLS VSTREGEGLS VSTREGEGLS FSVTSGGQSR FSVTSGGQSR FSVTSGGQSR HYQERLNSEQ HYQERLNSEQ HYQERLNSEQ KVLDVSDLES KVLDVSDLES	LRGAVLGLQD LRGAVLGLQD 100 QEEQRQHLHL QEEQRQHLHL QEEQRQHLHL 150 QDETVLLGVD QDETVLLGVD QDETVLLGVD IFKPISIQTM IFKPISIQTM IFKPISIQTM SCLNEWTAMA SCLNEWTAMA SCLNEWTAMA VTSKEIRQAL

